

EOCEP Algebra 1 Data Review Report

On November 18, 2016 the South Carolina Department of Education convened a panel of experts to review item data on the EOCEP for Algebra 1. The panel looked at items with a high percentage of students answering correctly and items with a low percentage of students answering correctly. The discussions of that panel yielded the following recommendations.

Areas where Algebra 1 grade students are doing well include the following standards:

- A1.AREI.1
- A1.AREI.10
- A1.FIF.4
- A1.FIF.7

Teachers must keep up the rigor on these standards, and at the same time, work hard to improve performance on standards on which students did not perform as well.

Standards of concern:

- A1.ASE.1
- A1.ASE.2
- A1.ASE.3
- A1.FIF.1.a
- A1.NRNS.2

The panel recognizes the hard work of SC educators and offers the following as suggestions for ways to improve student success on the EOCEP for Algebra 1.

- Give problems with real-world situations. Since many of the test items have some sort of context, there are not many non-contextual math problems.
- Furnish students with practice translating a real-world problem from a verbal description to an algebraic description.
- Include problems where the result is given and the students must select an equation or a system of equations that could produce the given result.
- Give students an opportunity to experience a long assessment in a single sitting at least once before taking the EOCEP for Algebra 1.
- Teach verbal, tabular, algebraic, and visual representations of linear and exponential functions. Give students two or more functions in one or more of those representations and have them identify each as linear or exponential.
- The theme of Algebra 1 is linear, quadratic, and exponential. Teachers should spiral literal equations throughout this theme.
- Arrange to include literal equations from other disciplines, e.g. biology, physics, economics.
- Have students practice describing parts of a given equation or expression in terms of a given real-world situation. This may include explaining what the variable represents or what a particular term represents.
- Provide students with practice factoring polynomials. In particular, students should be able to factor a monomial with a variable out of a polynomial.
- Present students with practice using radical bases raised to rational exponents. Then have them rewrite those expressions using only rational exponents.